

(11) Publication number:

62076612 A

PATENT ABSTRACTS OF JAPAN Generated Document.

(21) Application number: **60215173**

(51) Intl. Cl.: H01L 21/205 H01L 21/263

(71) Applicant: MITSUI TOATSU CHEM INC

KITAGAWA YORIHISA

(72) Inventor: KONAGAI MAKOTO

FUKUDA NOBUHIRO

(22) Application date: 30.09.85

(43) Date of application (30) Priority: publication:

08.04.87

(84) Designated contracting

states:

(74) Representative:

SEMICONDUCTOR THIN (54) MANUFACTURE OF

(57) Abstract:

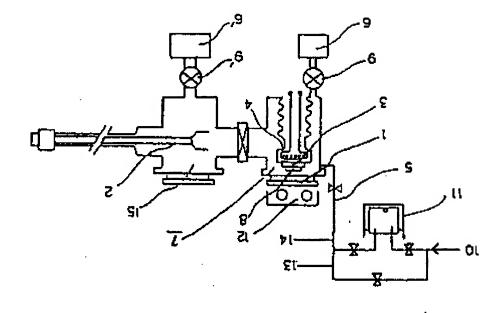
PURPOSE: To form a semiconductor thin film with superior orientation on single crystalline substrate by photoconsisting of fluorosilane, silane or, a single crystalline or amorphous discomposing a mixture gas desirably, hydrogen.

crystallineor amorphous single CONSTITUTION: A single

5/10/01

placed in a thin film forming device 7 fluorosilane being more than twice he crystalline substrate whose surface is window 1, a substrate holding means 3, a substrate heating means 4, a gas discharge means 6, and the substrate which has at least a light permiating vaccum discharge. The material gas SimH2m+2 (integer of m=1W3) are group compounds, phosphine (PH3) usable. As the III group compounds introduction means 5 and a vaccum cleaned with washing or etching is nFn(integer of n=1W3) or Si2F6 is fluorosilane being 0.5W50 and the is supplied to the said device, with former. As the fluorosilane, SiH4usable. As the silane, monosilane, dibolane (B2H6) is usable. As V flowing ratio of hydrogen to the disilane, trisilane expressed with is heated to 100W400°C under to be added to the mixture gas, the flowing ratio of silane to or arsine (AsH3) is usable.

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